

**Notice of Allowability**

Application No.

10/660,182

Examiner

Hari Patel

Applicant(s)

OGAWA ET AL.

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 9/11/03.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

THOMAS LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1 – 4 are allowed over the prior art of record.
2. The following is an examiner's statement of reasons for allowance:

Applicant's admission of prior art (AAPA) teaches a data transfer unit used in a clock swapping system including a transmitter to send data synchronously with a first clock and a receiver to receive data synchronously with a second clock different from the first clock, the transmitter being supplied with a transmission permit signal, and sending, in response to the received transmission permit signal, a transmission enable signal indicating that the data is valid while sending the data synchronously with the transmission enable signal, and the receiver being supplied with a reception permit signal, and sending, in response to the reception permit signal, a reception enable signal indicating that the data is valid while receiving the data synchronously with the reception enable signal. AAPA also teaches a method thereof.
3. Cantrell et al. (U.S. Patent No. 5,387,825) teaches a data circuits for providing data in an asynchronous environment, the circuit comprising:

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an input circuit for accepting data upon receipt of an edge of an asynchronous pulse, the asynchronous pulse having a first edge, a second edge, and a finite duration between the first and second edges;

a delay circuit for delaying the asynchronous pulse for a period at least as long as the delay of data flow; and

an output circuit for accepting the output data upon the receipt of a delayed edge of the delayed asynchronous pulse.

4. The prior art of record does not teach individually or in combination said data transfer unit comprising:

a data latching means for latching the data sent from the transmitter in time with the reception enable signal and from which latched data is read by the receiver in time with the reception enable signal;

a first latching means for latching the transmission enable signal sent from the transmitter in time with the first clock and delaying the latched transmission enable signal for at least one period of the first clock;

a second latching means for latching the transmission enable signal latched by the first latching means in time with the second clock;

a reception permit signal generating means for sending a reception permit signal synchronous with the second clock response to the transmission enable signal latched by the second latching means and suspending sending of the reception permit signal in response to the reception enable signal from the receiver;

a third latching means for latching the reception enable signal sent from the receiver in time with the second clock and delaying the latched reception enable signal for at least a period of the second clock;

a fourth latching means for latching the reception enable signal latched by the third latching means in time with the first clock; and

a transmission permit signal generating means for sending transmission permit signal synchronous with the first clock in response to the reception enable signal latched by the fourth latching means and suspending sending of the transmission permit signal in response to the transmission enable signal sent from the transmitter.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should be preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on State of Reasons for allowance."

### ***Conclusion***

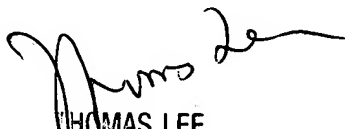
5. Any inquiry concerning this communication from the examiner should be directed to Hari Patel whose telephone number is 571-272-2743. The examiner can normally be reached on Monday – Thursday from 8:00am – 5:30pm and every other Friday from 8:00am – 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee, can be reached at 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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Examiner  
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